

REMARKS

Claims 1-10 and 12-24 remain pending in this patent application. Claims 8-10, drawn to a non-elected species, stand withdrawn from consideration under 37 CFR § 1.142(b).

In this paper, applicant is amending claims 1-4, 14-16, 22 and 23.

ALLOWABLE SUBJECT MATTER

Applicant notes with appreciation the Examiner's recognition of allowable subject matter in claim 12. Applicant submits that claims 17/12, 18/12, 19/12, 21/12, 22/12, 23/12 and 24/12 are allowable along with parent claim 12. Also, since claim 24/3 was not subjected to a rejection, Applicant assumes that this claim is allowable. For reasons presented below, Applicant submits that claims 1-7, 13-16, 17/3, 18/3, 19/3, 20, 21/3, 22/3 and 23/3 are also allowable.

OBJECTION TO CLAIMS

The Examiner objected to claims 4 and 16 as not further limiting the subject matter of a parent claim, observing that these claims should not depend from claim 1. Applicant is obviating the objection by amending claims 4 and 16 to depend solely from claim 2.

PRIOR ART REJECTION I

Claims 3 and 17 stand rejected under 35 USC § 102(a & e) as being anticipated by US 6645086 B1 (Chen). Since parent claim 12 of multiple dependent claim 17 has been allowed, Applicant is construing this rejection as having been applied to claims 3 and 17/3. Applicant traverses this rejection insofar as it might be deemed applicable to claims 3 and 17/3 as now presented.

The Chen club head includes a hollow body formed by casing 10 and cover plate 40 that may be characterized as resin components. A neck 16 of casing 10 receives a metal tube 20, forming a hosel of the club head. Applied over the front face 11 and bottom surface 12 of the casing 10 is a sheet metal piece 30 that forms the face plate 31 and sole plate 32 of the club head. In the statement of the rejection, the Examiner makes no mention of the requirement in independent claim 3 that the resin component is integrally provided with a tubular portion

protruding into the hollow and forming a socket into which the tubular part of the hosel portion is inserted. In fact, there is no element in the Chen club head that can be reasonably equated with this claimed feature.

Without acquiescing in the rejection, Applicant is amending claim 3 to recite the resin component as being provided with an opening to expose a back face of the face plate to the hollow of the head. Support for the amendment can be found, for example, in the specification on page 7, lines 12-15. Because the back face of the face plate is exposed to the hollow of the club head, the restitution coefficient of the face plate can be enhanced. In the Chen club head, the front face 11 of the casing confronts and engages the back face of face plate 31, significantly restricting flexing of the face plate and degrading the restitution coefficient of the face plate. Obviously, the combination of features recited in claim 3 cannot be met by the disclosure in Chen.

In view of the foregoing observations, Applicant submits that the disclosure in Chen cannot properly serve as a basis for rejecting claims 3 and 17/3 under 35 USC § 102(a & e).

PRIOR ART REJECTION II

Claims 2, 4, 6 and 7 stand rejected under 35 USC § 103(a) as being unpatentable over Chen in view of US 6102813 (Dill). Since Chen has not been used to reject parent claim 1 of multiple dependent claims 4 and 6, Applicant is construing the rejection as having been applied to claims 2, 4/2, 6/2 and 7. Applicant traverses this rejection insofar as it might be deemed applicable to 2, 4/2, 6/2 and 7 as now presented.

The Examiner acknowledges that Chen does not disclose a club head with hosel portion including a tubular part formed integrally with the metal component. As a remedy for this deficiency, the Examiner cites the club head disclosed by Dill and proposes modifying the Chen club head to incorporate the hosel construction used in the Dill club head. Applicant is mystified by the Examiner's statement, "Regarding claim 7, see the above regarding claim 5 and claim 6" (page 7 of the Office Action), since there is nothing "above" regarding claim 5, and the Examiner's comment regarding claim 6 does not seem to be relevant.

The modification of the Chen club head proposed by the Examiner would entail a major reconstruction of the Chen club head, such that the resulting club head would be unrecognizable

as a club head constructed according to Chen's disclosure. Also, there is no disclosure or suggestion in Chen that a hosel construction other than the one disclosed would be feasible or desirable. Accordingly, Applicant submits that there is no reasonable basis in the applied prior art for making the modification proposed by the Examiner.

Without acquiescing in the rejection, Applicant is amending independent claim 2 to recite the resin component as being provided with an opening to expose a back face of the face plate to the hollow of the head. As noted above, Chen does not disclose this claimed feature of Applicant's club head. Also, as explained above, there are significant advantages over the applied prior art that attend this claimed feature of Applicant's club head.

From the foregoing observations, it should be evident that even if the Chen club head were modified as proposed by the Examiner, the resulting club head could not meet the clear requirements of Applicant's amended claim 2. The dependent claims recite further patentable departures from the applied prior art. For example, there is no suggestion in either Chen or Dill of a sole plate that is gradually increased in the thickness towards the rear end thereof, as recited in claim 7. (For arguments regarding this feature in claim 5, see the discussion below.)

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Chen and Dill can properly serve as a basis for rejecting claims 2, 4/2, 6/2 and 7 under 35 USC § 103(a).

PRIOR ART REJECTION III

Claims 5, 18 and 19 stand rejected under 35 USC § 103(a) as being unpatentable over Chen in view of Dill and US 1269745 (Robertson). Since parent claim 12 of multiple dependent claims 18 and 19 has been allowed, Applicant is construing this rejection as having been applied to claims 5, 18/3 and 19/3. Since the Examiner mentions claim 20 in the statement of the rejection (page 7 of the Office Action), Applicant is also construing this rejection as having been applied to claim 20. Applicant traverses this rejection insofar as it might be deemed applicable to claims 5, 18/3, 19/3 and 20.

The Examiner cites Robertson as disclosing a sole plate that can vary in thickness for adjusting the weight of the club head, particularly noting Fig. 4 of Robertson in which the thickness of the sole plate increases in thickness away from the striking face. The Examiner

contends that it would have been obvious to modify the Chen-Dill club head to incorporate the Robertson sole plate.

Robertson discloses a varying thickness sole plate fastened by screws to the bottom of a solid wood club head. Applicant submits that the Robertson disclosure would not find obvious application to a technologically advanced metal/resin hollow club head such as the one disclosed by Chen, or to Chen's club head modified, as proposed by the Examiner, to incorporate Dill's hosel construction.

Applicant also notes that the Robertson disclosure offers no remedy whatsoever for deficiencies of the Chen and Dill disclosures vis-à-vis the requirements of amended claims 2 and 3 as pointed out above.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Chen, Dill and Robertson can properly serve as a basis for rejecting claims 5, 18/3, 19/3 and 20 under 35 USC § 103(a).

PRIOR ART REJECTION IV

Claims 1, 4, 6 and 16 stand rejected under 35 USC § 103(a) as being unpatentable over US 6932875 B2 (Cheng et al.) in view of Chen and Robertson. Applicant traverses this rejection insofar as it might be deemed applicable to claims 1, 4, 6 and 16 as now presented.

As shown in Fig. 1 of Cheng et al., a sole plate 10, a face plate 11 and hosel 12 constitute an integrally formed metal component of a club head. Edges of a carbon fiber, or resin, cover 20 are joined to edges of the metal component to form a hollow club head. The Examiner acknowledges that the resin component of the Cheng et al. club head does not have a flange for supporting the face or a sole that increases in thickness toward the rear.

The Examiner cites Chen as disclosing a recessed area for accommodating the face plate and asserts as "fact" that "the recess portion supports the face plate in the same manner as the flange of applicant." The Examiner also asserts that one of ordinary skill in the art would have found Chen's recess and Applicant's flange to be "obvious mechanical equivalents" and would have found it obvious to use the recess of Chen within the club head of Cheng et al. in order to support the face plate.

The Examiner cites Robertson as disclosing a sole plate that can vary in thickness for adjusting the weight of the club head, particularly noting Fig. 4 of Robertson in which the thickness of the sole plate increases in thickness away from the striking face. The Examiner contends that it would have been obvious to modify the Cheng et al. club head to incorporate the Robertson sole plate, adding that one of ordinary skill in the art would have found it obvious for the thicknesses of the sole plate to be a "value suitable for the user."

Applicant submits that the face plate support arrangements used by Cheng et al. and Chen are not mechanical equivalents as asserted by the Examiner: in the Cheng et al. club head, the cover 20 is joined only to edges of the face plate 11, whereas in the Chen club head the entire, front face 11 of the casing 10 supports the face plate 31. Applicant also submits that the Examiner's proposal to modify the Cheng et al. club head so that the face plate is supported as in the Chen club head would have been counterintuitive, not to mention unobvious. The modification proposed by the Examiner would obviously degrade the performance of the Cheng et al. club head by significantly restricting flexing of the club face.

Robertson discloses a varying thickness sole plate fastened by screws to the bottom of a solid wood club head. Again, Applicant submits that the Robertson disclosure would not find obvious application to a technologically advanced metal/resin club head such as the one disclosed by Cheng et al. Moreover, the application of the Robertson disclosure to the Cheng et al. club head, as proposed by the Examiner, would violate explicit teachings of Cheng et al. relating to weight distribution of the club head.

Without acquiescing in the rejection, Applicant is amending claim 1 to specify that the flange of the resin component supports only an edge portion of the metal component, whereby a back face of the face plate is exposed to the hollow of the head. Applicant is also amending claim 1 to recite particulars of the hosel portion. Amended claim 1 thus recites a club head in which the face plate, exposed to the hollow of the head and spaced from the tubular part of the hosel portion, exhibits an especially favorable restitution coefficient.

There are no teachings in Cheng et al., Chen and Robertson that disclose or suggest the construction of the hosel portion as recited in claim 2.

For reasons presented above, Applicant does not agree that the modifications of the Cheng et al. club head proposed by the Examiner would have been obvious. Even if these modifications were made, the resulting club head would not meet the requirements of Applicant's claims 1 and 2. It is inconceivable, for example, that the resulting club head would have a hosel portion with a tubular part extending upwardly from the sole plate while leaving a space between the face plate, and being connected to the metal component only at the sole plate, as recited in claim 1. It is also inconceivable that the resulting club head would have a hosel portion as recited in claim 2.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Cheng et al., Chen and Robertson can properly serve as a basis for rejecting claims 1, 4, 6 and 16 under 35 USC § 103(a).

PRIOR ART REJECTION V

Claims 13-15 and 21-23 stand rejected under 35 USC § 103(a) as being unpatentable over Chen in view of Dill and JP 09-253242 (JP '242). Since parent claim 12 of multiple dependent claims 21-23 has been allowed, Applicant is construing this rejection as having been applied to claims 13-15, 21/3, 22/3 and 23/3. Applicant traverses this rejection insofar as it might be deemed applicable to claims 13-15, 21/3, 22/3 and 23/3 as now presented.

The Examiner proposes modifying the Chen-Dill club head so that it has a center of gravity depth and sweet spot height according to teachings in JP '242.

Without acquiescing in the Examiner's proposed combination of teachings in Chen and Dill, Applicant observes that the JP '242 disclosure cannot remedy deficiencies in the Chen and Dill disclosures vis-à-vis the clear requirements of parent claims 1 and 2, as pointed out above.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Chen, Dill and JP '242 can properly serve as a basis for rejecting claims 13-15, 21/3, 22/3 and 23/3 under 35 USC § 103(a).

PRIOR ART REJECTION VI

Claims 13-15 stand rejected under 35 USC § 103(a) as being unpatentable over Cheng et al. in view of Chen and Robertson and further in view of JP '242. Applicant traverses this rejection insofar as it might be deemed applicable to claims 13-15 as now presented.

The Examiner proposes modifying the Cheng et al.-Chen-Robertson club head so that it has a center of gravity depth and sweet spot height according to teachings in JP '242.

Without acquiescing in the Examiner's proposed combination of teachings in four documents, Applicant observes that the JP '242 disclosure cannot remedy deficiencies in the Cheng et al., Chen and Robertson disclosures vis-à-vis the clear requirements of parent claims 1 and 2, as pointed out above.

In view of the foregoing observations, Applicant submits that no reasonable combination of the disclosures in Cheng et al., Chen, Robertson and JP '242 can properly serve as a basis for rejecting claims 13-15 under 35 USC § 103(a).

CLAIMS TO NON-ELECTED EMBODIMENTS

In the discussions above, Applicant has shown that claims 1-3 are allowable. Claim 1 is generic to the non-elected species illustrated in Figs. 9 and 10 and the species illustrated in Fig. 12. Claims 2 and 3 are generic to all of the species identified by the Examiner in the Requirement for Restriction dated July 20, 2005. In view of the allowability of claims 1, 2 and 3, Applicant submits that claims 8-10 should now be recognized as allowable along with their parent claims under 37 CFR § 1.141(a).

CONCLUSION

In view of the amendments and observations presented herein, Applicant respectfully requests that the Examiner reconsider and withdraw the objection and the rejections stated in the outstanding Office Action and recognize all of the pending claims as allowable.

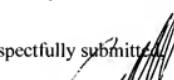
If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren, Reg. No. 32,874, at the telephone number provided below, so that these matters can be resolved expeditiously.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: January 29, 2007

Respectfully submitted,

By _____


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